



March 15, 2023

The Honorable Liane Randolph, Chair
California Air Resources Board
1001 I Street
Sacramento, CA 95814

RE: Newtrient Comments on February 22, 2023, Workshop to Discuss Potential Changes to the Low Carbon Fuel Standard

Dear Chair Randolph,

Newtrient respectfully offers comments in response to the February 22, 2023, Public Workshop regarding potential changes to the Low Carbon Fuel Standard (LCFS). Newtrient was founded by leading milk cooperatives and organizations, representing 20,000 dairy farmers producing approximately half of the nation's milk supply. Newtrient delivers solutions to environmental and economic challenges, including advancing manure management technologies and products. Through a team of credible technical experts in manure management systems, nutrient recovery, renewable energy and environmental asset markets, Newtrient helps farms and the industry reduce the environmental footprint of dairy.

Newtrient applauds the leadership the California Air Resources Board (CARB) is taking on climate change and appreciates being a part of this important dialogue surrounding potential changes to the Low Carbon Fuel Standard (LCFS). The dairy industry has answered the call to action and is embracing environmental responsibility - from family farms in California, to farms across America. By installing and utilizing biogas systems, farms are offering practical solutions to the challenges CARB seeks to address.

Two programs directed by the California Department of Food and Agriculture (CDFA) have been particularly vital to the progress California has made. According to the 2022 CARB Mid-Year Data Update report on the cumulative progress of the California Climate Investments Program (CCIP), the Dairy Digester Research and Development Program (DDRDP) and the Alternative

Manure Management Program (AMMP) have received a total of \$263.5 million in funding and have reduced 22.1 million MTCO₂e. The funding for these programs represents 1.84% of the California Climate Investments program as of May 31, 2022, but the GHG reductions from these two programs represent 28.11% of the total for all California Climate Investments programs¹.

There are 73 subprograms listed in the 2022 CARB Mid-Year Data Update report on the cumulative progress of the California Climate Investments Program as of May 31, 2022. Only one of these subprograms has produced a GHG reduction at a cost of less than \$10 per MTCO₂e, that is the Dairy Digester Research and Development Program. This program has reduced the largest GHG reductions of any single subprogram and represents the single most effective program in CARB's overall strategy to achieve the ambitious climate goals set by the State of California.

In December of 2022, researchers at UC Davis published the study, *Meeting the Call: How California is Pioneering a Pathway to Significant Dairy Sector Methane Reduction* in which they stated "...analysis shows that continued implementation and commitment to the incentive-based climate smart solutions that are currently driving voluntary dairy methane reduction in California should, by 2030, achieve the full 40 percent reduction in dairy methane sought by state regulators without the need for direct regulation."²

To continue this significant and unprecedented progress made by CARB and the dairy industry of California under the guidance and support of the CDFA, Newtrient submits the following comments regarding the potential changes to the LCFS program:

Newtrient Encourages CARB to Adopt Higher Carbon Intensity Reductions:

Newtrient encourages CARB to accelerate the progress toward meeting climate goals and to support the market price of LCFS credits. CARB should adopt a higher carbon intensity (CI) reduction to nothing less than 35 percent by 2030 and 90 percent by 2045.

The transportation sector continues to be California's largest source of emissions, so it is critical to align the carbon intensity targets in the LCFS program with the state's overall climate goals.

¹ California Climate Investments Program: 2022 CARB Mid-Year Data Update (May 31, 2022), (<https://www.caclimateinvestments.ca.gov/annual-report>)

² Kebreab, Ermias, Ph.D., Mitloehner, Frank, Ph.D., and Sumner, Daniel A., Ph.D., *Meeting the Call: California is Pioneering a Pathway to Significant Dairy Methane Reduction* (December 2022), available at: <https://clear.ucdavis.edu/news/new-report-california-pioneering-pathway-significant-dairy-methane-reduction>

Since SB (Senate Bill) 32 requires a 40 percent reduction in overall carbon emissions by 2030, CARB should require the same reduction in the transportation sector. Not only will this help align reductions in the transportation sector with the state’s overall climate targets, but it will significantly decrease carbon output quickly. By taking immediate action, we can make substantial progress toward stabilizing our planet and reversing its changing climate.

As outlined in Governor Newsom’s July 22, 2022, letter to CARB, Newtrient encourages CARB to “consider an increase in the stringency of the Low Carbon Fuel Standard and to work with relevant agencies to accelerate refinery transitions away from petroleum to the production of clean fuels.”³ Newtrient also supports CARB’s long-stated objective, expressed in this workshop and several previous ones, to align the next set of LCFS amendments with the Scoping Plan.

Further, as the CARB LCFS Data Dashboard illustrates, the 2021 performance of the LCFS continues to surpass historic compliance targets. Accordingly, Newtrient supports a thorough evaluation of appropriate CI reduction targets that align with current market conditions and the modeling and objectives of the Scoping Plan. This should include consideration of targets and appropriate trajectories from 2024-2045, including a potential step down in CI in 2024 and nothing less than the CI reductions of 35 percent by 2030 and 90 percent by 2045. The targets proposed are achievable and in line with the California climate change policies that require CARB to pursue the greatest possible greenhouse gas (“GHG”) reductions and California’s Global Warming Solutions Act, Assembly Bill 32 (“AB32”), which directs CARB to achieve maximum technologically feasible and cost-effective GHG emissions reductions, and Assembly Bill 1279, signed into law in September 2022, which requires the state to achieve net zero GHG.

Newtrient Urges CARB to Reconsider Elimination of Book and Claim:

Newtrient is concerned to see CARB’s proposal in the workshop that would effectively cut many U.S. dairies out of the California LCFS by limiting Book and Claim to only projects connected to the western United States gas grid. Newtrient urges CARB to reconsider the proposed elimination of Book and Claim in order to maximize the benefits of the program, avoid stranding assets, and to meet accelerated GHG goals.

³ Governor Newsom. July 22, 2022, Letter to CARB
(<https://www.gov.ca.gov/wpcontent/uploads/2022/07/07.22.2022-Governors-Letter-to-CARB.pdf?emrc=1054d6>)

CARB has a well-deserved reputation as a visionary pace setter for the kind of change that begins at home in California and drives environmental policy across the country. Though Newtrient is pleased to see some states establish their own LCFS programs, there are still too few. Currently, states that do not have their own LCFS participate in the robust California market, supporting GHG reducing projects. Renewable Natural Gas (RNG) projects connected to an interstate pipeline receive California LCFS credits, driving the growth of low carbon fuels nationwide by providing incentives to dairy RNG producers. Losing access to the California market for non-western RNG producers would be a major setback to national adoption of low carbon fuels.

Forward-looking entities operating outside of California have looked for ways to connect their renewable energy initiatives to the standards that are set in Sacramento, whether that is through state legislatures adopting regulatory policies based on the LCFS or businesses connecting their projects directly to the LCFS. In this way, these organizations are catalysts for broader adoption of policies inspired by CARB nationwide.

Therefore, while the changes to the Book and Claim program that were proposed by CARB last month may prove beneficial to California companies, they will have the unintended consequence of derailing billions of dollars of planned investments in RNG projects east of the Rockies and undermine confidence in CARB's technology and science-based implementation. Newtrient members and other dairies who rely on Book and Claim to drive the growth of renewables in other parts of the country have identified multiple projects that hinge on the accessibility of the California credit market. These projects all divert methane emissions away from our skies and into pipelines instead. An abrupt cessation of access to the LCFS for these initiatives would not only hurt the RNG market outside California, but worse, would eliminate a major incentive that drives our national pivot away from fossil fuels.

While the idea behind limiting Book and Claim to projects on the western pipeline is to reduce the abundance of credits on the market, thereby increasing credit prices, CARB's proposal to significantly increase CI reduction targets is intended to accomplish the same goal. Thus, the limitation on Book and Claim to western projects would disincentivize renewable natural gas production nation-wide in the name of achieving credit pricing goals in California that may already be reached by other means.

Further, we recommend updating LCFS rules to allow book and claim for onsite power generation for charging medium and heavy-duty electric vehicle (EV) fleets fueled by directed

biogas RNG. Opening up this pathway will directly support Governor Newsom's Executive Order N-79-20, which established a target where 100 percent of medium and heavy-duty trucks are zero emission vehicles by 2045, while also eliminating the need for diesel backup generators at EV charging facilities. One of the biggest challenges with deployment of fleet EV charging facilities is that they require a large amount of capacity, and transportation infrastructure upgrades that can take up to 5 years to complete. Allowing book and claim for directed biogas RNG for power generation powering medium and heavy-duty EV fleets would not only accelerate the State's transportation electrification goals, it would also allow dairies producing biogas to access this growing market.

Loss of Book and Claim projects in other states will virtually eliminate any chance of meeting the accelerated GHG goals for the LCFS program. CARB's proposed modifications would have a limiting effect on the momentum that we are seeing in California and around the country for programs modelled after the LCFS and could risk reviving the circa 2015 legal stay of the LCFS over program structuring that appears intended to disproportionately disadvantage interstate commerce.

We strongly urge CARB to leave Book and Claim unchanged, as existing projects and those in development would risk becoming stranded assets with associated damages and this risk will prevent participants from following through on projects in and outside of California. But, if CARB is committed to the proposed changes to Book and Claim, Newtrient fervently recommends that CARB, if dedicated to the suggested alterations to Book and Claim, should introduce an extended wind-down period, preferably equal to the investment lifecycle of current projects, which is usually around two decades. This time frame should commence only after the completion of the projects under construction. A protracted phaseout would harmonize with the RPS program's gradual termination, enabling adequate time for other states to launch LCFS programs or establish a nationwide clean fuel standard. In addition, this approach would facilitate initial capital recovery for projects prior to transitioning to lower revenue-generating applications in residential and industrial sectors. A more substantial carbon intensity reduction is a better way to for CARB to demonstrate leadership and create opportunities for in-state producers and overall supply of negative carbon fuels.

Newtrient Strongly Opposes Phasing Out Avoided Methane Crediting:

Newtrient strongly opposes all scenarios where avoided methane crediting will be phased out of the LCFS program.

This policy is inconsistent with the incentive-based approach outlined in SB 1383 and currently being implemented in California. Moreover, eliminating avoided methane crediting in the dairy sector would lead to an inability to meet the state's targeted methane reduction goals and result in significant dairy methane emissions leakage. Avoided methane crediting is a key component of dairy methane reduction incentives that has achieved significant reductions to date and as stated previously, is one of the most effective tools to meet California's GHG goals.

According to the UC Davis analysis:

. . . misguided efforts to change course by forced coercion to pasture-based operations, direct regulation of dairy farms, or limitation on dairy digester incentives will not only fail to achieve the desired greenhouse gas emissions reductions but will exacerbate the problem by causing significant emissions leakage. Revenue streams that incentivize investment in biogas capture and beneficial use are critical. Phasing out of avoided methane crediting in the dairy sector would jeopardize existing projects, making them uneconomic in the long-term, and dry up investment capital for the additional digester projects sought by CARB to achieve the state's ambitious and aggressive targets.⁴

The ultra-low carbon indices within the dairy Anaerobic Digestion (AD)/Biogas sector are real and well-vetted within the national laboratory-developed Greenhouse Gases, Regulated Emissions, and Energy Use in Technologies (GREET) model. As such, anyone who values science must appreciate their role in meeting GHG and climate goals, and not selectively replace them with non-scientific reasoning.

The low carbon intensity of these projects arises from a combination of well-to-wheels carbon gains plus the methane offsets from baseline methane emissions from manure management, storage, and application. Methane offsets from baseline emissions are a legitimate accounting practice as baseline, pre-AD/biogas systems emissions exist, and are largely removed through the installation of the AD/biogas system.

CARB has carefully and correctly set the boundaries of animal agriculture and clearly defines the baseline scenario of California dairies by providing a diagram of the LCFS boundaries and indicating the project related components in the Compliance Offset Protocol for Livestock

⁴ Kebreab, Ermias, Ph.D., Mitloehner, Frank, Ph.D., and Sumner, Daniel A., Ph.D., Meeting the Call: California is Pioneering a Pathway to Significant Dairy Methane Reduction (December 2022), available at: <https://clear.ucdavis.edu/news/new-report-california-pioneering-pathway-significant-dairy-methane-reduction>

Projects Capturing and Destroying Methane from Manure Management Systems Adopted:
November 14, 2014.

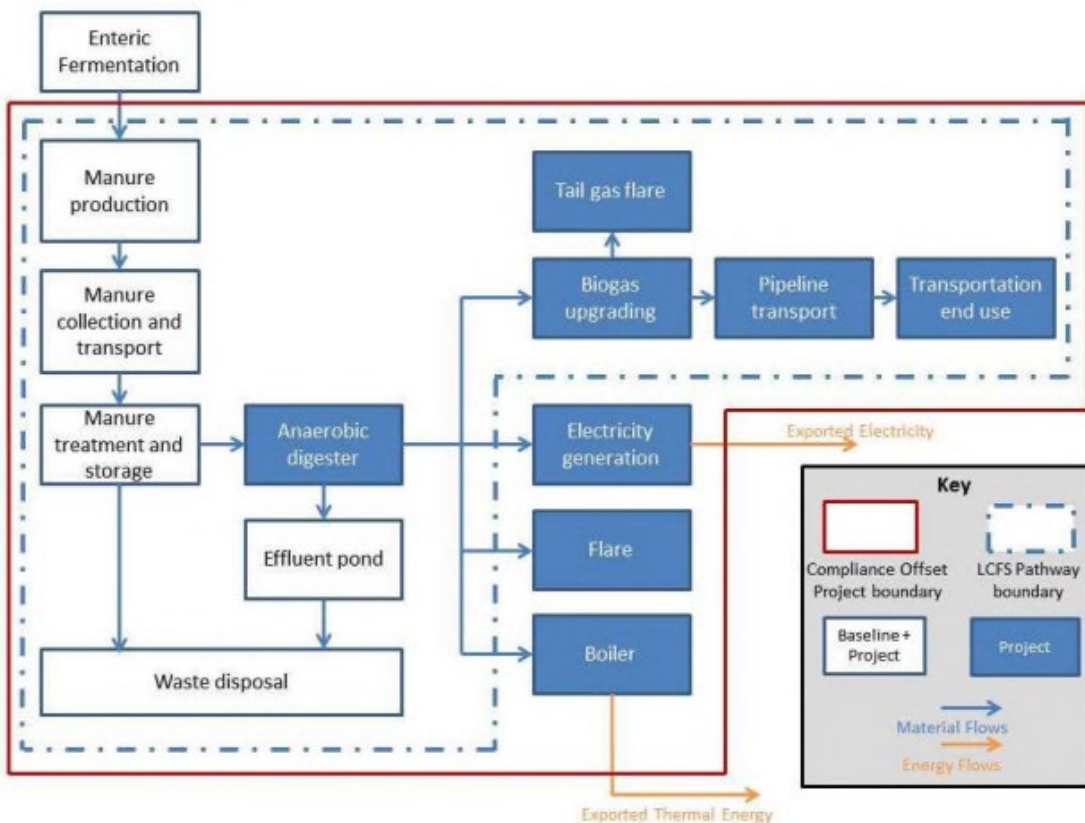


Figure 1: System Boundaries for Livestock Protocol and LCFS Manure-to-RNG Pathways

In addition to Figure 1, Table 4.1, “Description of all GHG Sources, GHG Sinks, and GHG Reservoirs” within the document lists the sources, sinks and reservoirs for livestock projects, indicating which gases are included or excluded from a project. The content of the list makes it clear that CARB did consider feed production and enteric emissions from dairy operations, but that these were outside the boundary of the livestock protocol because they are part of the natural emissions from the dairy operation which are covered under the carbon footprint of the milk and meat produced. Manure is not a “product or by-product” of the dairy operation but is a material which is created as part of the production and not made for its own value.

Some groups misrepresent the dairy industry and, as in the case of the comments made during the presentation, misrepresent the benefits of the use of anaerobic digestion and renewable energy production on dairy farms. Anaerobic digestion systems have scientifically supported

GHG reductions. By calling the scientifically supported GHG reductions achieved by AD systems “artificially inflated,” they show that they are not willing to discuss the science and the significant impact of AD on reducing GHG emissions from farms, but instead label and denigrate these projects with their own unscientific opinions. Newtrient would ask that CARB rely on sound science when making determinations about the program.

Revenue streams that incentivize investment in biogas capture and beneficial use are critical. Phasing out of avoided methane crediting in the dairy sector would jeopardize existing projects, making them uneconomic in the long-term, and dry up investment capital for the additional digester projects sought by CARB to achieve the state’s ambitious and aggressive targets.

Newtrient Welcomes CARB’s Consideration of the Following:

- **Advocate For Ongoing Investment in Dairy Digester Methane Capture and Beneficial Use:** CARB must continue to advocate for ongoing investment in dairy digester methane capture and beneficial use. The LCFS should align requirements for dairy fuel pathways with the findings in the Scoping Plan, CARB’s 2022 Short Lived Climate Pollutant (“SLCP”) Report, and recent research by UC Davis, which all show a significant need for ongoing investment in dairy digester methane capture and beneficial use.
- **Updating GREET Modelling:** Accurately measuring fugitive emissions from landfill-diverted organics is critical to encourage continued investment in critical climate change technology. The current model is based on a 1997 EPA study and estimates that 75% of landfill emissions are captured. An updated GREET model will allow much more accurate detection of fugitive emissions, as recent studies from NASA JPL and CARB have indicated that significantly more emissions may be emitted from landfills.
- **Market Use Limitations:** Newtrient is concerned with and does not support the efforts to limit markets for RNG to outside the transportation sector. While markets for RNG as a replacement for conventional fossil gas are developing, they are developing slowly, remain uncertain, and are highly limited. These efforts are unnecessary since in-state dairy RNG can adapt to the state’s evolving transportation policies and be converted to electric vehicle use as well as hydrogen for heavy duty ZEV trucks and other fleets. Moreover, forcing captured biogas into nascent RNG markets outside of the transportation sector will not provide the investment signals needed to build the next

tranche of in-state dairy digesters to meet California methane reduction goals.

- **Market Mechanisms:** Newtrient supports the development of market mechanisms which would allow CARB management to dynamically respond to emerging market conditions in the LCFS transportation sector in a timely fashion. Credit-price band mechanisms, floor prices, and other mechanisms can increase certainty in credit markets and facilitate continued and expanded investment. We encourage CARB to work with stakeholders to develop such mechanisms. The combination of accelerated CI targets and dynamic market mechanisms to maintain healthy credit balances will send the long-term signal required to enable much needed investment certainty and bring credit and deficit production back into balance.
- **Reject Calls to Regulate Dairies:** The California legislature designed SB 1383 dairy and livestock methane reduction goals to promote the use of rewards and potential penalties to induce a desired behavior, in this case methane reduction. SB 1383 clearly intended to prioritize the use of voluntary, incentive-based measures to achieve methane reductions before regulations would be developed and implemented. Further, SB 1383 only authorizes CARB to implement regulations to meet the 2030 dairy and livestock reduction targets after January 1, 2024, and only after key conditions are met. These considerations include the determination by CARB and CDFA that any proposed regulations are technologically and economically feasible, cost-effective, and mitigate and minimize (prevent) leakage, which occurs when milk production and resulting emissions shift out of California.⁵ SB 1383 also mandates an evaluation of the achievements made by incentive-based programs.⁶

Newtrient appreciates CARB's efforts to lead a robust stakeholder process ahead of formal rulemaking. We look forward to continuing to partner with the California dairy industry, CARB, and other stakeholders in the successful achievement of the state's climate goals, particularly the world leading Short Lived Climate Pollutant (SLCP) targets and programs. Greenhouse gas ("GHG") emissions have a global impact, and it is important that CARB demonstrate that its programs can harmonize environmental goals and protect the state's economy. This is

⁵ Meredith L. Fowlie, Mar Reguant and Stephen P. Ryan, Measuring Leakage Risk, May 2016.

⁶ Analysis of Progress toward Achieving the 2030 Dairy and Livestock Sector Methane Emissions Target, Final, California Air Resources Board, March 2022. <https://ww2.arb.ca.gov/sites/default/files/2022-03/final-dairy-livestock-SB1383-analysis.pdf> In this important report, ARB documents that more than half of the needed methane emission reductions are already in progress.



particularly true of local economies in the disadvantaged communities the State says it will prioritize. California's dairy farm families and developers are striving to develop projects that not only reduce potent SLCP emissions, but also create opportunities for economic development that helps protect jobs and improve baseline environmental conditions in these communities.

Thank you for your consideration of these comments.

Sincerely,

A handwritten signature in dark ink, appearing to read "Mark Stoermann", followed by a long, horizontal, slightly wavy line.

Mark Stoermann
Chief Operating Officer
Newtrient LLC